



# UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE  
United States Patent and Trademark Office  
Address: COMMISSIONER FOR PATENTS  
P.O. Box 1450  
Alexandria, Virginia 22313-1450  
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
-----------------	-------------	----------------------	---------------------	------------------

10/754,026

01/08/2004

Avoki M. Omekanda

DP-310298

6093

22851 7590 11/08/2006

DELPHI TECHNOLOGIES, INC.

M/C 480-410-202

PO BOX 5052

TROY, MI 48007

EXAMINER

AURORA, REENA

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 11/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

5/1

<b>Office Action Summary</b>	<b>Application No.</b> 10/754,026	<b>Applicant(s)</b> OMEKANDA ET AL.	
	<b>Examiner</b> Reena Aurora	<b>Art Unit</b> 2862	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 25 August 2006.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1 - 24 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1 - 24 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)          | 4) <input type="checkbox"/> Interview Summary (PTO-413)           |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____                                      |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)          | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____  | 6) <input type="checkbox"/> Other: _____                          |

**DETAILED ACTION**

This communication is in response to amendment received on 08/24/06. <sup>10</sup>

***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1 – 24 are rejected under 35 U.S.C. 102(e) as being anticipated by Nehl et al. (6,720,763).

The applied reference has a common assignee and common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention “by another,” or by an appropriate showing under 37 CFR 1.131.

As to claim 1, Nehl et al. (hereinafter Nehl) discloses a rotary position sensor comprising a ring magnet (10', fig. 2B) couplable to the rotatable member (not shown, col. 1, lines 54 - 58), the magnet defining magnetic flux lines (24'), said magnetic flux

Art Unit: 2862

lines having a magnetic flux direction within the magnet (10') and emanating from a magnetic pole of a surface of said ring magnet (10') and returning to an opposite magnetic pole of a second magnetic surface, portions of the magnetic flux lines being main flux lines emanating away from the magnet and aligned within 45 degrees with the direction of magnetization, and portions of the magnetic flux lines being return flux lines returning in directions forming an angle of more than 45 degrees with the direction of magnetization; and at least one magnetic field sensor (30a) disposed in at least one of said return flux lines and outputting a signal representative of the angular position of the magnet (Note Abstract and col. 3, lines 52 - 64).

As to claims 9 and 10, Nehl discloses a rotary position sensor comprising providing a disk-shaped magnet 10, fig. 2A) defining magnetic flux lines (24), said magnetic flux lines having a magnetic flux direction within the magnet and emanating from a magnetic pole of a first surface of said disk-magnet and returning to an opposite magnetic pole of a second surface of said disk-shaped magnet, portions of the magnetic flux lines being main flux lines emanating away from the magnet and aligned within 45 degrees with the direction of magnetization, and portions of the magnetic flux lines being return flux lines returning in directions forming an angle of more than 45 degrees with the direction of magnetization; sensing (30) magnetic flux in at least one of said return flux lines; and outputting a signal representative of the angular position of the magnet, based on the sensing act (Note Abstract and col. 3, lines 28 - 40).

As to claim 17, Nehl discloses a rotary position sensor comprising magnetic means selected from the group consisting of ring magnet (10', fig. 2B) and disk-shaped

Art Unit: 2862

magnet (10, fig. 2A) for generating a magnetic field having magnetic flux lines (24, 24'), wherein said magnetic flux lines have a magnetic flux direction within the magnetic means and emanate from a magnetic pole of a first surface of said magnetic means and return to an opposite magnetic pole of a second surface of said magnetic means, portions of the magnetic flux lines being main flux lines emanating away from the magnet and aligned within 45 degrees with the direction of magnetization, and portions of the magnetic flux lines being return flux lines returning in directions forming an angle of more than 45 degrees with the direction of magnetization; and sensing means (130) disposed in said return flux lines generated by the magnetic means for outputting a signal representative of an angular position (Note Abstract; col. 3, lines 28 – 40 and lines 52 - 64).

As to claims 2, 4 – 5, 12 – 13 and 20 - 21, Nehl discloses that the sensor (30) is disposed radially outside of an outer diameter of the magnet (fig. 2A, 2B).

As to claim 3, 11, 18 and 19, Nehl discloses that the sensor is a Hall effect sensor (col. 3, lines 28 - 40).

As to claims 6 – 7, 14 – 15 and 22 – 23, Nehl discloses that the sensor (30) is oriented to sense an axial component of magnetic flux (fig. 2A, 2B).

As to claims 8, 16 and 24, Nehl discloses that the rotatable member is a vehicle component (col. 1, lines 30 - 35).

***Response to Arguments***

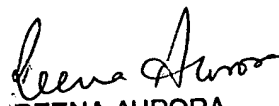
Applicant's arguments with respect to claims 1 - 24 have been considered but are moot in view of the new ground(s) of rejection.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Reena Aurora whose telephone number is 571-272-2263. The examiner can normally be reached on Monday - Friday, 7:00 - 3:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, E. Lefkowitz can be reached on 571-272-2180. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

Reena Aurora

  
REENA AURORA  
PRIMARY EXAMINER  
TECHNOLOGY CENTER 2800